



## **FISHBONE DIAGRAM (Ishikawa diagram) FOR THE GREEN TRANSITION (Paradigm-preserving methods)**

The fishbone diagram, or Ishikawa diagram, is a visual tool for analysing cause and effect relationships. It can be used to systematically identify and structure the root causes of the problems hindering or slowing down the green transition in a health and care organisation. The method is particularly suitable for problem solving and process analysis. The fishbone diagram will help participants to understand what factors influence the outcome of the green transition and how they can be taken into account in the development of solutions.

### **What is required:**

- From the group: the ability to critically analyse problems and identify their causes.
- From the facilitator: the ability to guide the discussion and keep the analysis focused.
- Openness and creative thinking to look at the causes of the problems from different perspectives.

**Level of difficulty:** 1–3 (easy–moderate, depending on the complexity of the problem)

**Time required:** 20–60 min, depending on the scale of the problem and the number of participants.

### **Materials:**

- A flipchart or whiteboard
- Markers and notepads
- Digital tools (for example Miro, MURAL) for remote use

**Participants:** 3–10 people, depending on the problem

### **How to use:**

1. Define the problem - discuss and record the problem at the head of the fishbone diagram ('the head of the fishbone').
2. Identify the main categories - select the main causes (for example people, processes, materials, environment) that affect the problem and record them in the 'bones' of the fishbone.
3. Identify the sub-causes - under each main category, list the more detailed factors that affect the problem.
4. Analyse the links - discuss cause and effect relationships and assess which factors are most significant.
5. Prioritise and develop solutions - select the most important root causes and generate solution ideas based on them.

### **When to use:**



- In the early stages of problem solving to understand the causes
- In process analysis
- In innovation and development work to understand the complexity of the green transition

#### Why to use:

- Helps to understand the root causes of problems hindering or slowing down the green transition, not just the symptoms
- A visual and easy-to-understand way to deal with the complexities of the green transition
- Supports teamwork and multidisciplinary collaboration
- Helps to prioritise critical factors

#### How to document:

- The completed fishbone diagram can be photographed or digitally stored
- Written notes on reasons and solutions
- Proposed solutions are processed into further actions

**The roots of the method can be found here:** The fishbone diagram was developed by Professor Kaoru Ishikawa in the 1960s as part of the Total Quality Management (TQM) methodology. The method is deeply linked to the principles of causal analysis and Lean thinking (Deming, 1986; Juran, 1992). It is applicable in many fields, such as engineering, business and education, and is particularly used in Six Sigma methods (Pyzdek & Keller, 2014).